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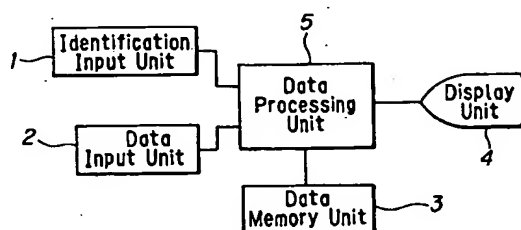
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(54) Personal data recording and reproducing device for use in vehicle.

(57) Disclosed is a personal data recording and reproducing device for use in a vehicle, which allows each individual driver or each group to exclusively recording and reproducing own personal data and also to easily and selectively reading-out only own personal data. The device recognizes an input identification of an individual person or a group, store input information with reference to the recognized identification in case of data input request and reads out and outputs a stored information with reference to the recognized identification in case of data output request.

FIG. 1



EP 0 582 081 A2

## BACKGROUND OF THE INVENTION

The present invention relates to a device for exclusively recording and reproducing data for each personal or each group with reference to personal or group identification, and, more particularly, to a personal information recording and reproducing device for use in vehicles.

Recently, there has been developed such a vehicle navigating apparatus for measuring and displaying a current position of the vehicle on a road map indicated on a display screen, which is also capable of registering driver's home location and automatically reading-out the location on the road map and automatically setting a start point of the vehicle thereon.

Another vehicle navigating apparatus is capable of preliminarily recording driver's private information such as addresses concerned (target places), telephone numbers and the like and reading-out the private data on a display screen according to the need.

However, in case that plural drivers are allowed to use commonly a vehicle provided with the above-mentioned navigating apparatus wherein their private data are registered, there may occur such a problem that when each registered driver drives the vehicle, he has to perform complicated operations to selectively read-out own private information from the apparatus memory containing a large amount of all authorized users' data. Furthermore, the apparatus allows any person to access to the private information memory, i.e., the privacy can not be protected.

## SUMMARY OF THE INVENTION

In view of the foregoing, the present invention was made to provide a personal data recording and reproducing device for use in a vehicle, which is capable of exclusively recording and reproducing data for each driver or group and comprises means for inputting each personal or group identification, means for recognizing an input identification, means for requesting data input or output, means for inputting data, means for memorizing input data with reference to the identification recognized when the data input was requested, means for reading-out data stored with reference to the identification recognized when the data output was requested and means for outputting the data.

Protection of the input and stored personal data is achieved by providing means for checking whether the recognized identification corresponds to any one of preliminary registered identifications of persons not allowed to access the private or group data stored in the device or not, and prohibiting the person to input and output information if

he is identified to have no access to private data or group data. Thus the proposed device assures exclusive use of private or group data by only privileged individual or group.

## BRIEF DESCRIPTION OF DRAWINGS

Fig. 1 is a block diagram showing an example of a personal information memory and reading-out device according to the present invention, which is mountable in a vehicle.

Fig. 2 is a flow chart showing, by way of example, how operates a personal data memory unit and reading-out unit according to the present invention.

Fig. 3 shows an example of a memory table of personal data according to passwords.

Fig. 4 shows an example of personal information read out from a memory by a password.

In these drawings, there are shown an identifying data input unit 1, a data input unit 2, a data memory unit 3, a display 4 and an data processing unit 5.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, a preferred embodiment of the present invention will be described in detail as follows:

Fig. 1 is a construction view showing an embodiment of the present invention, which comprises an identification data input unit 1 for inputting a password for each person or each group of persons and indicating a request for data input or output, an data input unit 2 for inputting data there-through, a data memory unit 3 for storing input data, a display 4 for indicating data read-out from the data memory unit and a variety of messages, an data processing unit 5 which controls whole system to recognize an input password, enter an input information with the recognized password into the data memory unit 3, read-out a specified information from the data memory unit 3 and indicate the information onto the display 4.

The data processing unit 5 also holds previously registered therein passwords of persons (drivers) that are have no access to the stored private data or group data, makes a check of input password for accessibility and, if the person has no access, prohibits him from inputting and outputting data and indicates a message (No access) on the display 4.

In this embodiment, each individual or group has own password but he may be also identified by own name or ID. Furthermore, it is also possible to use a face-image identifying device provided with a video-camera or a fingerprint identifying device that

may omit identification input operation.

The identification input unit 1 and the data input unit 2 may be unified in one input control unit using a keyboard.

It is also possible to store input data in a non-volatile memory in the data processing unit 5, omitting the data memory unit 3.

Referring now to a flow chart shown in Fig. 2, the operation of the above-mentioned personal data recording and reproducing device will be described as follows:

When a user enters his password into the device through the identification input unit 1 and then enters an input or output request, the data processing unit 5 checks whether the input password is an identification of a person not allowed to use the device or not, and, if it is non-admitted person, prohibits him from inputting or outputting data, and indicates a message (access is prohibited) on the display unit 4.

When the password does not identify any non-admitted person, the data processing unit 5 checks whether the password has been already registered in a password list or not. If the password is not found in the list, the data processing unit additionally writes it in the list and, then, accepts the input or output request.

In case of the input request, the data processing unit 5 turns itself to operate in input mode, outputs a message requiring of the user to input an information to the display unit 4 and receives the data inputted through the data input unit 2, transferring the data to the data memory unit 3 wherein the input data is stored sequentially in order of input time in a table with reference to the password as shown in Fig. 3.

In case of the output request, the data processing unit 5 checks whether the password is registered as an index in the table of the information memory unit 3 or not, and, if it is not registered, indicates a message (prohibiting output) and requires of the user to enter another password.

When the password is stored in the table, the data processing unit 5 changes over operating mode to output mode, reads-out the data stored under the input password from the data memory unit 3 and output the data on the display unit 4.

In case if a plurality of data sets stored with the same password (ABC) in the table, of the data memory unit 3, the data processing unit 5 outputs all of said data sets at a time on the display unit 4 as shown in Fig. 4.

The present invention also provides that the data useful for all users are rendered as public data that may be freely inputted and outputted with no password entered.

When an input request is given without entering a password, the data processing unit 5 judges

the request for inputting open information, receives and stores the input information as an open data set in the data memory unit 3. When an output request is given without entering a password, the data processing unit 5 judges the request for outputting open information and then reads-out the previously stored open information from the data memory unit 3 and indicates them on the display unit 4.

As is apparent from the foregoing description, the personal data recording and reproducing device according to the present invention, which is applied for a vehicle navigating apparatus, offers such advantages that:

- in case of using a vehicle by plural drivers and registering personal data, e.g., home locations, concerned companies' addresses for persons for use in the navigating apparatus, the present device provides the possibility of exclusively recording and reproducing the personal data of each person or group to protect the privacy, and also of easily extracting only own private data from the large number of personal information;
- the present device is capable of prohibiting the non-admitted persons from inputting and outputting the personal data and of allowing only admitted persons or group to have access to the stored personal data by password identification, thereby assuring the reliable protection of the personal data.
- the present device also makes it possible for all users to freely (without entering their password) recording and reproducing public data useful for all users, thereby assuring increased usability of the device.

#### Claims

1. A personal data recording and reproducing device for use in a vehicle, comprising:
  - means for inputting identification for each individual person or a group;
  - means for recognizing the input identification;
  - means for requesting data input or output;
  - means for storing therein input data with reference to the recognized identification when data input being requested;
  - means for reading-out data stored with reference to the recognized identification when data output being requested;
  - and
  - means for outputting the read-out data.
2. A personal data recording and reproducing device for use in a vehicle, according to Claim 1, characterized by providing means to check whether a recognized identification relates to

one who is predetermined to have no access to the stored personal data and to be prohibited from inputting and outputting personal data in case of the identification of a person having no access.

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3. A personal data recording and reproducing device for use in a vehicle, according to Claim 2, characterized by providing means to output a inhibit message against an identification of a person having no access.

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4. A personal data recording and reproducing device for use in a vehicle, according to Claim 1, characterized in that data inputted without any identification are stored as public data and said public data are read-out and outputted when output is requested without entering any identification.

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FIG. 1

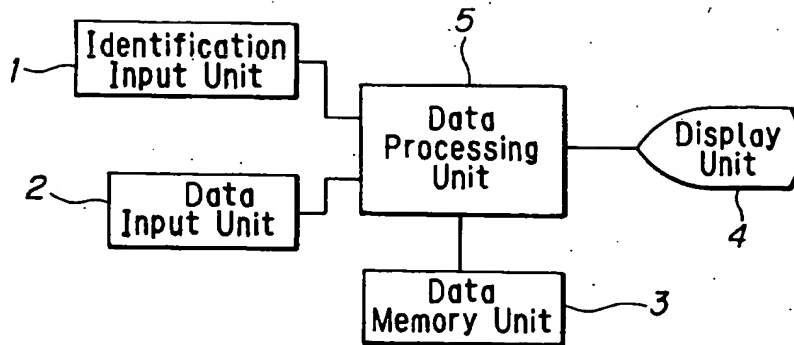
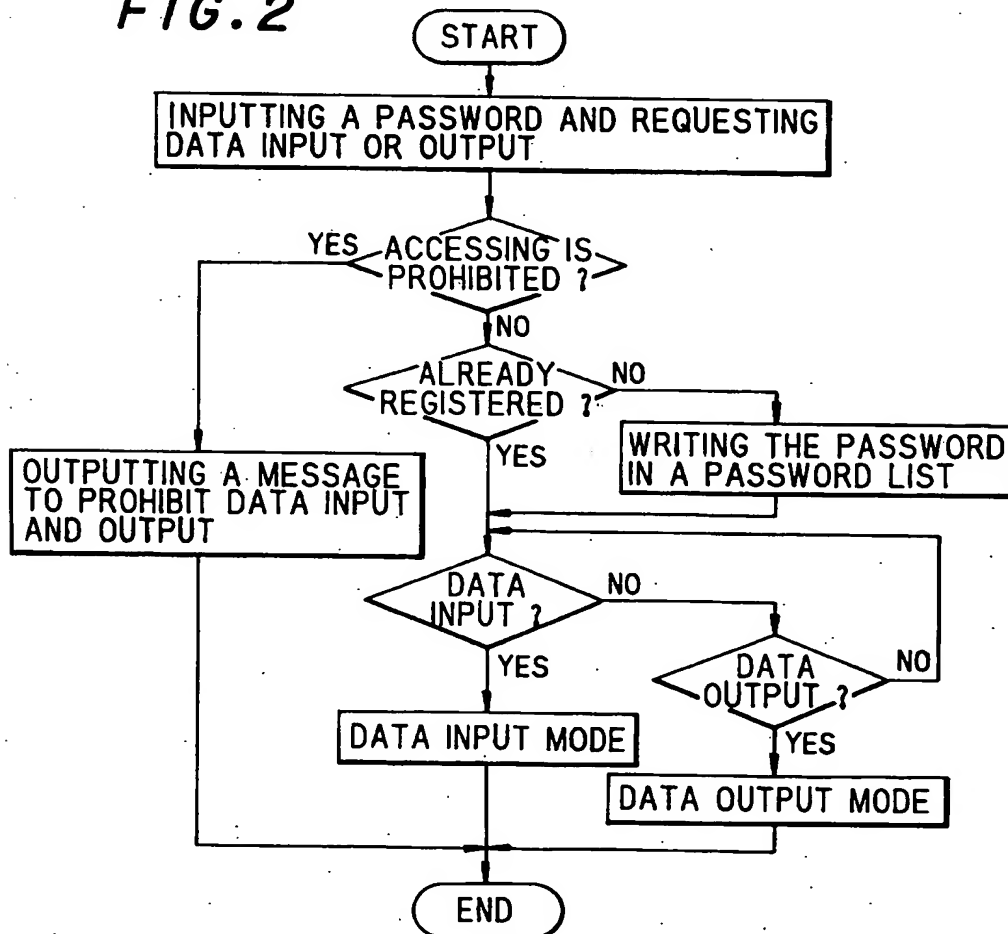


FIG. 2



**FIG.3**

PASSWORD	PERSONAL DATA
A B C	HOME LOCATION OF DRIVER A
D E F	HOME LOCATION OF DRIVER D
L M N	HOME LOCATION OF DRIVER L
A B C	ADDRESS OF COMPANY X
⋮	⋮

**FIG.4**

